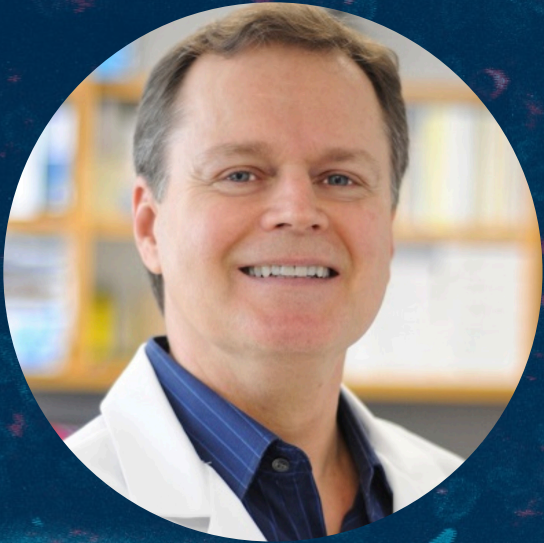


PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute at VTC and co-sponsored by the institute's Center for Human Neuroscience Research



JOHN A. DANI, Ph.D.

David J. Mahoney Prof. of Neurological Sciences
Chair, Department of Neuroscience
Director, Mahoney Institute for Neurosciences
Perelman School of Medicine
University of Pennsylvania

Addictive Nicotine and Stress Induce Convergent Mechanisms That Increase Alcohol Self-administration

Addictive drug reinforcement and stress signaling involve common neural circuitry. Dr. Dani and his team demonstrated in rodents that pre-exposure to nicotine or stress attenuates alcohol-induced dopamine responses and increases alcohol self-administration. A blunted dopamine signal results from ethanol-induced GABAergic excitation of GABA neurons in the ventral tegmental area. Blocking stress hormone receptors or preventing excitatory GABA signaling prevented the attenuated alcohol-induced dopamine response and prevented the increased alcohol self-administration caused by nicotine or stress. These results demonstrate that nicotine and stress alter the neural and behavioral responses to alcohol through a neuroendocrine signal that shifts inhibitory GABA transmission towards excitation.

FRIDAY, FEB. 21, at 11 a.m.

Room G101 A/B, 4 Riverside Circle

Watch live via Zoom at <https://FralinBioMed.info/PBR-Join>



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